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Effect of Non-Pharmachological Therapies For Pregnant Women with Mental Disorder: A Narrative Review

Effect of Non-Pharmachological Therapies For Pregnant Women with Mental Disorder: A Narrative Review

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Abstrak

Purpose: To determine the effectiveness of non-pharmacological interventions given to pregnant women with mental disorders. Methodology: The method used was a narrative review. Articles searched using PubMed, Science Direct and EBSCO databases. Eight articles were obtained as the final number of articles suitable for review. Findings: Of the eight articles were obtained, all used RCTs. Based on the eight articles that have been analysed, there are eight interventions, namely Spiritual Integrated Cognitive-Behavioural Educational Intervention, Cognitive Behavioural Therapy, Mindfulness-Based Childbirth and Parenting Program, Mindfulness-Based Cognitive Therapy, Bright Light Therapy, Transcranial Magnetic Stimulation Intervention, Group-Based Multicomponent Treatment, and The Mindful-moms Training. Contribution: Some of the interventions found can be used in the area of maternity nursing, especially for pregnant women and in the area of psychiatric nursing which focuses on mental disorders.

Kata Kunci:
Mental disorders
Non pharmacological therapy
Pregnant women

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Abstract

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INTRODUCTION

Mental health is a condition where an individual can develop physically, mentally, spiritually and socially so that the individual is aware of their own abilities, can deal with pressure, can work productively and is able to contribute to the community (Ministry of Health, 2015).

According to calculations of the burden of disease in 2017, several types of mental disorders predicted to be experienced by the population in Indonesia include depression, anxiety, schizophrenia, bipolar disorder, behavioral disorders, autism, eating disorders, intellectual disabilities, Attention Deficit Hyperactivity Disorder (ADHD) (Arinda & Herdayati, 2021).

Meanwhile, data for three decades (1990-2017) obtained by the World Health Organization stated that depressive disorders were ranked first for three consecutive decades. Apart from that, the 2018 Riskesdas results stated that depressive disorders can occur in all age groups and begin to occur in the 15-24 year age range with a prevalence of 6.2% (Kusumawati & Zulaekah, 2020). Vulnerable groups that are indicators of increasing depression rates are teenagers, pregnant women, early adults and the elderly with other supporting factors.

Mental health is a condition where an individual can develop physically, mentally, spiritually and socially so that the individual is aware of his own abilities, can deal with pressure, can work productively and is able to contribute to the community. Several types of mental disorders that are predicted to be experienced by the population in Indonesia include depression, anxiety, schizophrenia, bipolar disorder, behavioral disorders, autism, eating disorders, intellectual disabilities, Attention Deficit Hyperactivity Disorder (ADHD). The World Health Organization or WHO states that mental health disorders in women during pregnancy reach 10% and after giving birth it increases to 13, while in LMIC or low income countries, these figures reach 15.6% which is estimated for women who experience mental disorders during pregnancy and 19.8% of women after giving birth (Islami & Asiyah, 2021).

According to the World Health Organization (WHO), perinatal is the period starting from conception to a year postpartum and is believed to be the initial cause of depression. This is also triggered by drastic hormonal changes in a woman's body during pregnancy and childbirth which can cause feelings that are more sensitive and unstable emotional condition.

Other research shows that maternal mortality rates are also influenced by race and skin color, in black women the percentage of maternal and child comorbidities is higher than in white women (Islami & Asiyah, 2021). This is due to more stress, poor nutrition, and lack of medical supervision among black women. Health care providers must increase their efforts to provide early and ongoing care throughout pregnancy. This mortality rate in research is mainly shown to be comparable to the level of depression due to stress in pregnant women. The occurrence of depressive symptoms during the perinatal period can be easily recognized.

The estimated prevalence is 7.4% -20% antenatally and up to 19.2% in the first three months after delivery (Team, 2010). Antenatal depression is associated with poor nutrition, alcohol and substance abuse, poor health services, poor personal health, and sick babies. Postnatal depression has a significant impact on the mother and her partner, the family, the mother's interactions with the baby and the long-term emotional and cognitive development of the baby.

METHODOLOGY

The method used in this literature review is a narrative review regarding the effects of non-pharmacological therapies on pregnant women with mental disorders by presenting previously published material and then summarizing the topic of discussion. Articles searched using databases, namely PubMed, EBSCO, and Science Direct. In searching these databases, keywords were used namely pregnant woman, non-pharmacological therapy, and mental disorder. Inclusion criteria: articles for the last 5 years, namely 2018-2023, articles with the type randomized controlled trial, the number of participants in the study is at least 30 respondents, and articles in English and Indonesian as well as exclusion criteria: this type of research is non-experimental, does not discuss therapies related to non-pharmacology, and does not focus on discussing the effects of therapies on pregnant women with mental disorders.

RESULTS AND DISCUSSIONS

Results

From the results of the studies reviewed, eight articles met the criteria for this study and were selected for further analysis. Each research in the eight articles was conducted on various continents, such as America (n= 4). Europe (n=4), and Asia (n=1). The eight articles focused on pregnant women with mental disorders. The average age of respondents was between 18 and 40 years. All research articles focus on the effects of non-pharmacological interventions. Research methods were used in the eight articles that we obtained using a Randomized Controlled Trial. Study characteristics can be seen in Table 1.

Table 1. Study Characteristics

Characteristics	n	Authors
Country		
USA	2	(Kim et al. 2019), (Vieten et al., 2018)
Austria	1	(Zemestani & Fazeli Nikoo, 2019)
Netherland	2	(Van Ravesteyn et al. 2018) (Bais et al., 2020)
Iran	1	(Sanaeinasab et al., 2021)
Canada	1	(Furer et al., 2021)
Sweden	1	(Lönnberg et al., 2020)
Methods		
Randomized controlled trial (RCT)	8	(Sanaeinasab et al., 2021) (Furer et al., 2021) (Lönnberg et al., 2020) (Kim et al. 2019) (Van Ravesteyn et al. 2018) (Zemestani & Fazeli Nikoo, 2019) (Bais et al., 2020) (Vieten et al., 2018)
Age		
18 - 39 tahun	1	(Kim et al. 2019)
20 - 35 tahun	2	(Sanaeinasab et al., 2021) (Zemestani & Fazeli Nikoo, 2019)
21 - 40 tahun	5	(Furer et al., 2021) (Lönnberg et al., 2020) (Bais et al., 2020) (Vieten et al., 2018) (Van Ravesteyn et al. 2018)
Sample size		
< 50	2	(Sanaeinasab et al., 2021) (Furer et al., 2021)
50 - 100	1	(Bais et al., 2020)
101 - 500	5	(Lönnberg et al., 2020) (Zemestani & Fazeli Nikoo, 2019) (Vieten et al., 2018) (Van Ravesteyn et al. 2018) (Kim et al. 2019)
Duration of Intervention		
< 1 month	5	(Furer et al., 2021) (Lönnberg et al., 2020) (Zemestani & Fazeli Nikoo, 2019) (Vieten et al., 2018) (Van Ravesteyn et al. 2018)
1 - 5 month	3	(Sanaeinasab et al., 2021) (Bais et al., 2020) (Kim et al. 2019)

After reviewing the literature, we found 8 research articles that were in line with our research objectives, namely research on the effects of non-pharmacological interventions on pregnant women with mental disorders. And the following are the results of the article review which we have summarized below.

Spiritual Integrated Cognitive-Behavioural

Of all the articles, 1 article was found that was related to providing spiritual intervention through spiritually integrated cognitive-behavioral education where this intervention was carried out on pregnant women with psychological stress. This intervention was carried out over four face-to-face sessions, including distribution of other media such as pamphlets and CD-ROMs to strengthen the intervention. Participants in the intervention group were also able to contact specialists by telephone and social networks to ask related questions. Spiritual interventions are based on Islamic teachings. The spiritual intervention consisted of four 90-minute group education sessions conducted over eight weeks, along with the provision of resources and educational materials such as information on how to engage in virtual social networks, pamphlets detailing

the spiritual intervention and expected activities, and media. others explaining the intervention (CD).

Based on this intervention, the results of the study show that spiritual intervention carried out on pregnant women with psychological stress during pregnancy can significantly reduce psychological stress, perceived stress, anxiety and depression in pregnant women where the stress level in the intervention group was 10.9 (SD = 6.7) in time 1 and 6.4 (SD = 6.3) at time 3, while the control group was 12.2 (SD = 9.2) at time 1 and 12.7 (SD = 8.5) at time 3. The level of anxiety in the intervention group was 7.9 (SD = 5.7) at time 1 and 5.7 (SD = 5.1) at time 3, while the control group was 9.1 (SD = 7.2) at time 1 and 10.4 (SD = 6.3) at time 3. The level of depression in the intervention group was 6.8 (SD = 5.5) at time 1 and 4.0 (SD = 3.9) at time 3, while the control group was 8.3 (SD = 5.8) at time 1 and 9.9 (SD = 6.4) at time 3 (Sanaeinasab et al., 2021). In addition, spiritual intervention can also significantly affect physiological parameters, such as blood pressure. Therefore, the results of this study prove that a spiritually integrated cognitive behavioral education program can have a good effect on pregnant women with mental disorders in the form of psychological stress.

Cognitive Behavioural Therapy

Of all the articles, 1 article was found that was related to providing intervention through Cognitive Behavioral Therapy (CBT), which is an evidence-based non-pharmacological intervention approach that is able to overcome anxiety symptoms in pregnant women with mental disorders. In the CBT intervention, there are six CBT treatment sessions which include psychoeducation, improving self-care strategies, a checklist of 38 common avoidance behaviors, building relationships, identifying and overcoming negative thoughts and worries, and outlining common triggers.

In session 1, psychoeducation is conducted regarding the experience of anxiety during pregnancy and the postpartum period and how anxiety disorders can vary over time and will describe the anxiety cycle. In session 2, researchers improved self-care strategies for pregnant women to maximize the ability to care for babies where participants identified daily self-care needs and assessed the extent to which each need was met. In session 3, a checklist of 38 avoidable behaviors will help participants recognize their own avoidance patterns. These goals include areas of avoidance, checking and reassurance-seeking behaviors, potential self-care activities, and other personal goals. In session 4, fostering a developing relationship that can help maintain the relationship between parent and child during the womb or after birth. In session 5, focus on identifying and overcoming negative thoughts and worries. Finally in session 6, common triggers for relapse are outlined, including the birth of a new baby or pregnancy for which each mother develops a personalized relapse prevention plan.

Based on this intervention, the study results showed that with the Cognitive Behavioral Therapy (CBT) intervention, participants experienced a significant reduction in anxiety and depression from pre- to post-treatment with PASS scores decreasing from pre- to post-treatment, $F(1, 28) = 53, 36$, $p < 0.001$. Additionally, a repeated measures ANOVA was conducted with results indicating a significant main effect where EDPS scores decreased from pre- to post-treatment, $F(1, 29) = 28.83$, $p < 0.001$ with the number of participants above the cut-off value on the EPDS for "possible depression" decreased from 83% to 30% from pre- to post-treatment (Furer et al., 2021). Therefore, CBT intervention provides statistically and clinically significant results in overcoming anxiety symptoms in mothers with mental disorders.

Mindfulness-Based Childbirth and Parenting Program

Of all the articles, 1 article was found that was related to providing interventions through the Mindfulness-Based Childbirth and Parenting Program (MBCP), which

is the most empirically supported and general program for use in clinical settings to reduce stress and depression in pregnant women with mental health problems. . The original MBCP program developed in the United States was shortened by researchers to eight sessions and reunions, each 2 hours and 15 minutes long. Pregnant women in Sweden have free access to maternity health care facilities, which consist of programs with visits to midwives who provide support and information. Throughout the program, mindfulness practices are integrated with antenatal education.

The practice is similar to MBSR and MBCT with body scanning, mindful movement, sitting and walking meditation, loving-kindness meditation, and informal meditation in daily life. Specific to the MBCP curriculum are the interpersonal practices of mindful speaking and listening inquiry, methods for increasing awareness of the baby, and dealing with pain during labor where for each session, there is an informative text that is distributed including at-home practice assignments and a link to an audio file with the practice guided mindfulness. Participants were asked to do 30 minutes of formal exercise per day during the program as well as informal exercises whenever they felt fetal movement and during various other daily activities.

Based on this intervention, the study results show that the MBCP intervention is effective in reducing perceived stress in pregnant women with mental disorders and the risk of perinatal depression where MBCP significantly reduces perceived stress ($p = 0.038$, $d = 0.30$) and depressive symptoms ($p = 0.004$, $d = 0.42$), and increased positive state of mind ($p = 0.005$, $d = 0.41$), and self-reported mindfulness ($p = 0.039$, $d = 0.30$) (Lönnberg et al., 2020). Thus, this research proves that MBCP intervention is an efficient intervention strategy to prevent perinatal depression and has a good effect on pregnant women with mental disorders where there will be an increase in mental well-being in pregnant women.

Mindfulness-Based Cognitive Therapy

Mindfulness Based Cognitive Therapy (MBCT) is the most empirically supported and common program for use in clinical settings to reduce stress and depression in pregnant women with mental health problems. The original MBCP program was developed in the United States and consisted of nine weekly sessions of 3 hours, but in this study the researchers shortened the program to eight sessions and a reunion, each lasting 2 hours and 15 minutes. This allows participants with busy schedules to attend and this adaptation may make future implementations more cost-effective. Sessions were also shortened because the groups were only 8–14 people, less than the original program (usually consisting of 24–30 participants). Pregnant women in Sweden have free access to maternity health care facilities, which consist of programs with visits to midwives who provide support and information.

Bright Light Therapy

Participants were randomly allocated to treatment with BLT (9000 lux, 5000 K) or dim red light therapy (DRLT, 100 lux, 2700 K), which was considered placebo. For 6 weeks, both groups were treated every day at home for 30 minutes when they woke up. Follow-up was performed weekly during the intervention, after 6 weeks of therapy, 3 and 10 weeks after treatment and 2 months postpartum. Primary and secondary outcome measures Depressive symptoms were measured primarily with the Structured Interview Guide for the Hamilton Depression Scale—Seasonal Affective Disorder. Secondary measures were the Hamilton Rating Scale for Depression and the Edinburgh Postnatal Depression Scale. Changes in the rating scale scores of these questionnaires over time were analyzed using generalized linear mixed models.

Of all the articles, 1 article was found that was related to providing intervention through blablabla, namely . Blind testing was performed before starting the RCT. The integrity of the blind was tested in ten participants who were naïve to TMS exposure. There was no evidence of differences between any of the 8 VAS measures. The mean pain rating for active treatment was 1.44 (SD=1.42) and for sham treatment was 2.11 (SD=1.54), which was statistically similar, p=0.246 (Wilcoxon Rank Sum). Therefore, we conclude that the sham system is effectively blind. RCT subjects strongly guessed that they received the active coil and there was no significant difference in their responses with the coil (Fisher's Exact, p=0.411) indicating that participants were blinded.

No significant differences were found for estradiol before and after intervention (Linear Model controlling for baseline: B <.01, SE =.09, t(19) = 0.02, p=0.98) or progesterone (Linear Model controlling for baseline: B =.04, SE =.14,t19= 0.31, p=0.757) level between groups. There were no significant differences in post-treatment cognitive tests with coil (controlling for HDRs-17 and baseline cognitive scores) except for letter number sequence (LNS), 1 of 4 administered working memory tests, in those receiving active treatment (Linear Model: B =.25, SE =.92,t17=.27, p=0.013). The active group showed worse outcomes post-treatment on LNS compared to pre-treatment.

Group-Based Multicomponent Treatment

Pregnant women who were overweight (n =110) in their second trimester were enrolled in an 8-week group intervention. Feasibility, acceptability, and fidelity of facilitators were assessed, as well as stress, depression and eating behavior before and after the intervention. We also examined whether pre-to-post intervention changes in well-being outcomes and eating behavior were associated with changes in the proposed mechanisms of attention, acceptance, and emotion regulation. Participants attended an average of 5.7 sessions (median = 7) out of a total of 8 sessions, and facilitator fidelity was excellent. Of the women who completed the class evaluation, at least half reported that each of the three components of the class (mindful breathing, mindful eating, and mindful movement) was "very useful," and they used them almost every day at least once a day or more. Women increased in reported levels of mindfulness, acceptance, and emotional regulation, and these improvements correlated with reductions in stress, depression, and binge eating.

Discussion

Based on the eight articles that have been analyzed, each article discusses different interventions in an effort to provide non-pharmacological therapy for pregnant women with mental complaints or mental disorders. We can group them into 4 groups of intervention methods, namely visual, audiovisual, motor and therapy.

The first is intervention using visual methods, namely Cognitive Behavioral Therapy (CBT) intervention. This intervention is effective in increasing patient understanding in dealing with anxiety symptoms in pregnant women by providing psychoeducation and a checklist of 38 common avoidance behaviors. Apart from increasing independence, this intervention is also effective in improving attitudes in describing common triggers for symptoms independently. (Patricia et al., 2021)

Second, namely interventions using audiovisual interventions, namely Cognitive-Behavioral Integrated Spiritual Education, Mindfulness-Based Childbirth and Parenting Program (MBCP), and Group-Based Multicomponent Therapy. This intervention has proven to be effective in providing a stimulus for the development of emotional status and reducing psychological stress in pregnant women until delivery. Apart from that, this intervention is also effective in providing other therapies that influence the patient's physiology in measuring blood pressure, reducing pain

and being independent in controlling feelings. (Hormoz et al., 2021; Gunilla et al., 2021; Leontien et al., 2017)

The third is intervention using motor methods, namely Mindfulness Yoga, Mindful Moms Training and Mindfulness-Based Cognitive Behaviors Therapy interventions. This intervention has proven to be effective as an alternative to processing pregnant women's focus on comfort and mood using meditation or yoga. Apart from that, these three interventions have proven to be effective in providing attention and affection to babies who are still in the womb and preparing to become a mother. (Mehdi et al., 2018; Maria et al., 2012;; Cassandra et al., 2018)

And the fourth intervention, namely using therapeutic methods, includes Repetitive Transcranial Magnetic Stimulation (TMS) and Bright Light Therapy interventions. Both interventions are effective in providing a feeling of calm and comfort after undergoing pharmacological interventions recommended by the doctor previously. Apart from that, these two interventions use service facilities in the form of machines and light rays as well as light therapy to reduce the scale of postnatal depression and anxiety. (Deborah et al., 2020; Babette et al., 2020)

Every woman who is experiencing the transition period of pregnancy and post-birth definitely has different complaints in dealing with stimuli both from the surrounding environment and from within herself. Therefore, it would be better if these four interventions were the best interventions that could be given to pregnant women according to the level of mental disorders they are experiencing. However, the author recommends that visual, audiovisual and motor interventions are the best combination that can be given to pregnant women because it will increase understanding and affective images and attitudes towards themselves and their environment.

Apart from the effectiveness of non-pharmacological interventions given to pregnant women in improving their mental status. These studies also certainly require the role of nurses which is no less important because nurses are not only limited to providing care in hospitals, they can also make visits to the community to assist the government in disaster preparedness. The role of nurses is not only to reduce maternal and child mortality due to mental health. Nurses also play a role in preparing the community, especially pregnant women, to reduce the risk of death due to the lack of implementation and educational approaches related to mental health during pregnancy.

CONCLUSION

Based on the previous discussion, it can be concluded that of the eight types of non-pharmacological therapies studied, there is one therapies that we think is the most effective for application to pregnant women with mental disorders, namely visual, audiovisual and motor interventions in a balanced combination.

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